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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,195	06/19/2001	Chui-Kuei Chiu	4425-151	9850

7590 12/15/2004  
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EXAMINER

MENBERU, BENIYAM

ART UNIT PAPER NUMBER

2626

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/883,195	CHIU, CHUI-KUEI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Beniyam Menberu	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the use of the legal term “means” on line 15. Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities:

On page 4, line 24, the word “board” should be “broad”.

On page 6, line 25, “One of advantages” should be “One of the advantages”.

On page 8, line 11, the term “overlapped” should be “overlapping”.

Appropriate correction is required.

### ***Drawings***

3. The drawings are objected to because the box labeled 10 in Figure 1 should be “Power-on”. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6694062 to Yang.

Regarding claim 1, Yang discloses a calibration method used in an image-capture apparatus, said method comprising:

providing a calibration chart not built in said image-capture apparatus (column 3, lines 44-49),

capturing a plurality of information of said calibration chart by said image-capture apparatus (column 3, lines 37-39; lines 50-53); and

subjecting said information of said calibration chart to a correction means whereby corrects aberrance of said information (column 4, lines 10-20).

Regarding claim 3, Yang teaches all the limitations of claim 1. Further Yang discloses method wherein said image-capture apparatus comprises a plurality of sensor elements aligned in a direction (column 1, lines 24-28, lines 35-39).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6055071 to Kuwata et al.

Regarding claim 2, Yang teaches all the limitations of claims 1. However Yang does not disclose the method according to claim 1 further comprising: assigning a plurality of corresponding calibration values to said information with a host computer; and storing said corresponding calibration values for utilization of said image-capture apparatus.

Kuwata et al disclose method comprising: assigning a plurality of corresponding calibration values to said information with a host computer (column 27, lines 66-67; column 28, lines 1-2; column 16, lines 11-15; column 20, lines 47-50); and

storing said corresponding calibration values for utilization of said image-capture apparatus (column 16, lines 16-17).

Yang and Kuwata et al are combinable because they are in the similar problem area of imaging device calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inputting and storing of calibration value capabilities taught by Kuwata et al into the system of Yang to implement a calibration system which can accept input for calibration data from an external source.

The motivation to combine the reference is clear because calibration system can be more convenient and flexible if a user can change the values used in the calibration of a scanning system.

8. Claims 4, 5, 8, 9, 10, 13, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al.

Regarding claim 8, Yang discloses a calibration method of improving an output performance of an article captured by a scanner, said method comprising:  
providing a calibration chart (column 3, lines 44-49);  
scanning said calibration chart for capturing a plurality of information of all said pixels (column 3, lines 37-39; lines 50-53; column 4, lines 57-61; Yang discloses that some lines can be ignored as represented by the variable  $L$ . If  $L$  is zero then all pixels can be scanned); and

subjecting said information of all said pixels to a correction means whereby corrects aberration of partial said pixels (column 4, lines 10-20);

However Yang does not disclose a method of providing a calibration chart wherein consists of a portion of a plurality of pixels aligned in a direction and another portion of said pixels aligned orthogonal to said direction.

Dance et al disclose a calibration chart comprising a portion of a plurality of pixels aligned in said direction and another portion of said pixels aligned orthogonal to said direction (Figure 3A; column 7, lines 5-7, lines 16-18).

Yang and Dance et al are combinable because they are in the similar problem area of image system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration chart of Dance et al with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Dance et al teaches that the calibration chart is used to measure point spread function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

Regarding claim 4, Yang teaches all the limitations of claim 3. Further Dance et al disclose a calibration chart comprising a portion of a plurality of pixels aligned in said direction and another portion of said pixels aligned orthogonal to said direction (Figure 3A; column 7, lines 5-7, lines 16-18).

Regarding claims 5 and 10, Yang in view of Dance et al teach all the limitations of claims 4 and 8 respectively. Further Yang discloses the method according to claim 4,

wherein all said pixels are with a homogenous hue (column 3, lines 37-45. A white calibration paper can be considered to have pixels data that are all similar since there are no patterns on the paper.).

Regarding claim 9, Yang in view of Dance et al teach all the limitations of claim 8. Further Yang discloses the method, wherein said calibration chart comprises being not built in said scanner (column 3, lines 44-49).

Regarding claim 13, Yang in view of Dance et al teach all the limitations of claim 8. Further Yang disclose the method according to claim 8, wherein said scanning step comprises scanning said calibration chart with a linear sensor array of said scanner wherein consists of a plurality of sensor elements aligned in said direction (column 1, lines 24-28, lines 35-39).

Regarding claim 14, Yang in view of Dance et al disclose a method of capturing calibration information used in a scanner, said method comprising; providing a calibration chart consisting of a plurality of pixels arranged in a two-dimensional array (Figure 3A; column 7, lines 5-7, lines 16-18); and scanning all said pixels with a linear sensor array in said scanner, said linear sensor array consisting of sensor elements aligned in a direction and moving orthogonal to said direction for building said calibration information of said calibration chart (column 1, lines 24-28, lines 35-42; column 3, lines 37-39).

Regarding claim 17, Yang in view of Dance et al teach all the limitations of claim 14. Further Yang discloses the method according to claim 4, wherein all said pixels are with a homogenous hue (column 3, lines 37-45).



9. Claims 6, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5513300 to Shibazaki.

Regarding claim 6, Yang in view of Dance et al teach all the limitations of claim 4. However Yang does not disclose the method according to claim 4, wherein all said pixels are with different hues, whereby are outputted combined with an object article.

Dance et al disclose the method wherein calibration chart wherein all said pixels are with different hues (Figure 3a; column 7, lines 5-15, lines 54-64).

Shibazaki discloses method of forming combined images of pixel data from two sources (column 3, lines 50-53, lines 54-57, lines 59-61, lines 65-67; column 4, lines 24-25; Figure 1, reference 301,300,400).

Yang, Dance et al, and Shibazaki are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the multiple color calibration chart taught by Dance et al and the image combining method of Shibazaki into the calibration system of Yang to implement calibration system with capability of combining calibration image with scanned image.

The motivation to combine the reference is clear because Shibazaki teaches that overlapping images are used to improve the quality of print (column 1, lines 30-32) and Dance et al teaches that the calibration chart is used to measure point spread

function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

Regarding claims 11 and 18, Yang in view of Dance et al teach all the limitations of claims 8 and 14 respectively. Further Yang in view of Dance et al further in view of Shibazaki disclose the method, wherein all said pixels are with different hues (Dance et al: Figure 3a; column 7, lines 5-15, lines 54-64), whereby are outputted combined with said article (Shibazaki: column 3, lines 50-53, lines 54-57, lines 59-61, lines 65-67; column 4, lines 24-25; Figure 1, reference 301, 300,400).

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 5359458 to Melman et al.

Regarding claim 7, Yang teaches all the limitations of claims 1. However Yang does not disclose the method, wherein said correction means comprises a low-pass filter.

Melman et al disclose the method of calibration wherein said correction means comprises a low-pass filter (column 13, lines 66-68; column 14, lines 1-7).

Yang and Melman et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the low-pass filter correction with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Melman et al teaches that the high frequency components like dust are not desirable for a scanning (column 13, line 68, column 14, line 1-3).

11. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5359458 to Melman et al.

Regarding claim 12, Yang in view of Dance et al teach all the limitations of claim 8. However Yang in view of Dance et al does not disclose the method, wherein said correction means comprises a low-pass filter.

Melman et al disclose the method of calibration wherein said correction means comprises a low-pass filter (column 13, lines 66-68; column 14, lines 1-7).

Yang, Dance et al, and Melman et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the low-pass filter for correction as taught by Melman et al with the system of Yang in view of Dance et al to implement an accurate scanning system.

The motivation to combine the reference is clear because Melman et al teaches that the high frequency components like dust are not desirable for a scanning (column 13, line 68, column 14, line 1-3).

Regarding claim 15, Yang in view of Dance et al teach all the limitations of claim 14. Further Melman et al disclose the method according to claim 14 further comprising

subjecting said calibration information to a low-pass filter whereby corrects aberration of partial said pixels (column 13, lines 66-68; column 14, lines 1-7).

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 6055071 to Kuwata et al.

Regarding claim 16, Yang in view of Dance et al teach all the limitations of claim 14. However Yang in view of Dance et al does not disclose the method further comprising assigning a plurality of calibration values to said calibration information with a computer connected with said scanner.

Kuwata et al disclose the method further comprising assigning a plurality of calibration values to said calibration information with a computer connected with said scanner (column 27, lines 66-67; column 28, lines 1-2; column 16, lines 11-15; column 20, lines 47-50; Figure 21, reference 321, 101).

Yang, Dance et al, and Kuwata et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inputting and storing of calibration value capabilities taught by Kuwata et al into the system of Yang to implement a calibration system which can accept input for calibration data from an external source.

The motivation to combine the reference is clear because calibration system can be more convenient and flexible if a user can change the values used in the calibration of a scanning system.

### ***Other Prior Art Cited***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6226419 to Lodwick et al disclose system for aligning of margins for scanners.

U.S. Patent No. 6714321 to Rao et al disclose method and system for correcting calibration signal.

U.S. Patent No. 6788431 to Yamaguchi disclose method for calibration with correction.

U.S. Patent No. 4724330 to Tuhro disclose system used to calibrate a raster input scanner.

U.S. Patent No. 5309256 to Takada et al disclose image processing method and apparatus which uses a calibration chart.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (703) 306-3441. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (703) 305-4863. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

***Patent Examiner***

Beniyam Menberu

BM

12/10/2004

*Kim Williams*

**KIMBERLY WILLIAMS**  
**SUPERVISORY PATENT EXAMINER**